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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/336,207	06/18/1999	ROBERT G. MCCrackEN	8594560/9702	7367

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THE FINANCIAL CENTER  
666 WALNUT STREET  
SUITE 2500  
DES MOINES, IA 50309-3993

EXAMINER
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HORTON, YVONNE MICHELE

ART UNIT	PAPER NUMBER
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3635

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/336,207

Applicant(s)

MCCRACKEN, ROBERT G.

Examiner

Yvonne M. Horton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: see the marked attachment.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1,4-5,8-10 and 12 stand rejected and claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over CH 0004141 18 in view of U.S. Patent #3,716,959 to BERNARDI. CH 000414118 discloses a beam (B) including a pair of longitudinally extending and opposing "C-shaped" flanges (2) each having a central web section (W), a pair of inwardly extending leg sections (L) and an in-turned portion (IT) (See the marked-up attachment); and a convoluted web member (1) having alternating protrusions (4) adjacent to leg sections (L), (See the marked-up attachment). The web member (1) is secured to the central web section (W) of the flanges (2), and the protrusions (4) are secured to the leg sections (L) by securing means (3) and the in-turned portions (IT) are also indirectly secured by means (3) also. CH 000414118 discloses the basic claimed beam except for the use of end plates. The use of brackets and end plates to provide for the capability of interconnecting beam members is old and very well known in the art. BERNARDI teaches that it is known in the art to provide a beam structure (10) with end plates (36) wherein the endplates (36) along with welds (39,41,43) provide a rigid, column 2, lines 50-52, "full moment " connection, column 1, lines 45-51. It would have been obvious to one having ordinary skill in the art to provide the beam member of CH 000414118 with the end plates of BERNARDI in order to enable adjacent beam structures to be secured together and to provide the beam

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structure with added stiffness adjacent the ends thereof. Without end plates, a beam is weaker at the ends and is more likely to give under force applied at the ends.

In reference to claims 4 and 5 the web member (W) and the flanges (2) of CH 000414118 are coextensive in length and are made from sheet metal, (obtained from a brief translation).

Regarding to claims 8 and 9, the web member (W) is secured to the central web section (20) of the flanges (2) by welds (3), and the protrusions (4) are also secured to the leg sections (L) and in-turned portions (1T) by welds (3).

In reference to claim 10, the flanges are formed from sheet material; a material that inherently enables the flange members to be penetrated if desired or needed.

Regarding claim 12, CH 000414118 discloses the use beam (B); however, it does not disclose the use of a pair of beams. Although CH 000414118 does not disclose the use of a pair beams, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the beam (B) CH 000414118 with an additional beam (B); wherein the beams (B) would be connected in abutting engagement at their end plate, since the mere duplication of essential working parts of an invention involves only routine skill in the art. Adding an additional beam is quite conventional in the art especially when used in extended length environments such as bridges. Of course, attaching the members at the ends provides added strength.

In reference to claims 13 and 14, the end plate (36) of BERNARDI is positioned between the flange of the vertical members (12,14) and the horizontal/web member

(10). Thus, it too would have been obvious to one having ordinary skill in the art at the time the invention was made to provide and position the structure of CH000414118 with the end plate, as taught by BERNARDI, between the two interconnecting members, the web (1) and the flange members (2) in order to strengthen the connection therebetween and thereby giving the structure added rigidity to resistance against forces applied thereto. The addition of the end plate strengthens the connection at the joint thereby preventing the two members from separating when an excessive force is applied to the structure. Regarding claim 14, it would have been obvious to one having ordinary skill in the art at the time the invention was made to ensure that the end plate does not extend beyond the confines of the flange members. Sizing end plates according to the environment in which they are being attached is well within the general skill of a worker in the art.

Claims 2,3 and 11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over CH 0004141 18 in view of U.S. Patent #3,716,959 to BERNARDI as applied to claim 1 above, and further in view of U.S. Patent #6,253,529 to De BOER. As discussed in paragraph 2 above, CH 000414118, as modified by BERNARDI, discloses the basic claimed beam member except for the inwardly extending sections of the opposing flanges being recessed. Although it is old and very well known in the art to form a recess in a member to accommodate and tightly position a second member adjacent thereto in a flush manner, De BOER teaches that it is known in the art to form recesses (19,34,35) in the inwardly extending legs (14,15) of member (12). Hence, it would have been obvious to one having ordinary skill in the art to provide the inwardly extending

legs of the opposing flanges of CH 000414118, as modified by BERNARDI, with the recesses of De BOER in order to ensure a proper, flush and secure fit between the end plate and the adjacent and/or interfitting members.

In further reference to claim 3, the size of the recess with respect to the end plate would have been an obvious matter of design choice depending upon how securely the end plate is needed to be positioned against the opposing flanges. If no play is desired, the size of the recess is considerably close to the thickness of the end plate.

In further regards to claim 11, the flanges (2) are C-shaped and leg sections (2) include in-turned portions (IT), (See also the marked-up attachment).

Claims 6 and 7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over CH 000414118 in view of U.S. Patent #3,716,959 to BERNARDI. Neither CH 000414118 or BERNARDI discloses the basic claimed beam except for the specifics of the material characteristics and specifics of the C-shaped member. Although neither CH000414118 or BERNARDI does not disclose the particulars of the material and thickness dimensions, it would have been obvious to one having ordinary skill in the art to form the web and flanges out of a metal having "distinct" or "specific" characteristics and thicknesses in order to be used as a replacement for lumber beams which are conventional in the art for door and window framing members, but are extremely susceptible to warping when encountered by moisture; or for use in forming supports for concrete structures. The applicant is further reminded that material selection and the thickness thereof is an obvious matter of design choice that depends on the desired performance characteristics of the resulting beam member.

***Response to Arguments***

Applicant's arguments filed 11/18/04 have been fully considered but they are not persuasive.

Regarding the applicant's argument that the structure of BERNARDI does not disclose a "full moment connection", the applicant is reminded of his own definition that "full moment" means "rigid". Although it is true that that connection of the beam to the column of BERNARDI is "semi-rigid". However, this connection is "semi-rigid" prior to the inclusion of the end plate. Column 1, lines 47-51 detail that the end plate, once welded, provides a rigid connection. This is reiterated again in column 2, lines 28-36.

Although there are portions of the BERNARDI structure that are allowed to flex, it remains that the connection at the beam to column end are rigid. The applicant is further reminded that although a beam to column connection may be identified as being "rigid", there is still some, even if it's minute, amount of flexing that the structure undergoes due to loads applied thereto. If there wasn't any flexing at all, the connection would be brittle and would rupture and fail.

In response to applicant's argument that applicant's endplate is intended for use with a "Z" beam and not an "H" beam, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., an endplate with a "Z" beam) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

Regarding the applicant's argument that the examiner provide prior art demonstrating the use of an end plate to make a "full moment" connection between two beam members, if the structure of CH000414118 is modified with the end plate of BERNARDI to make the structure more "rigid", clearly, by the applicant's own definition a "full moment" or "rigid" connection is demonstrated and well within the general knowledge of a worker in the art.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne M. Horton whose telephone number is (703) 308-1909. The examiner can normally be reached on 6:30 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D. Friedman can be reached on (703) 308-0839. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YMH  
Art Unit 3635  
1/26/05



**BRIAN E. GLESSNER**  
**PRIMARY EXAMINER**

EXAMINER'S ATTACHMENT

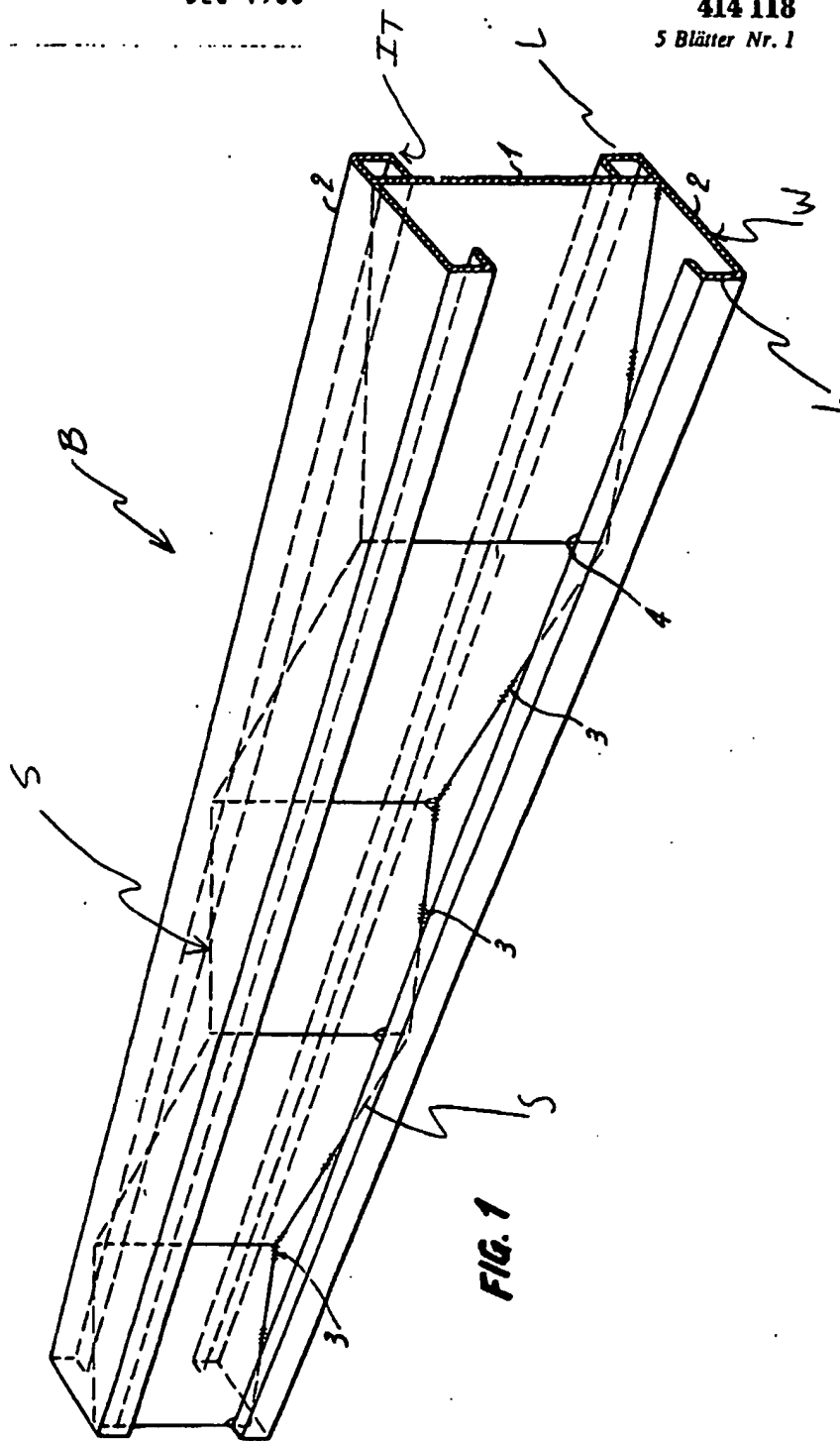
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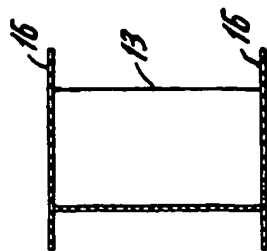


FIG. 14

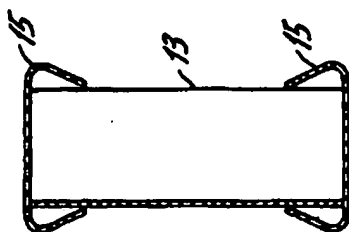


FIG. 13

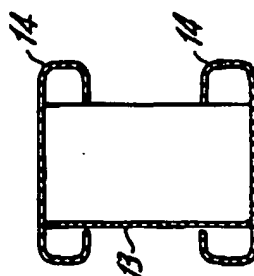


FIG. 12

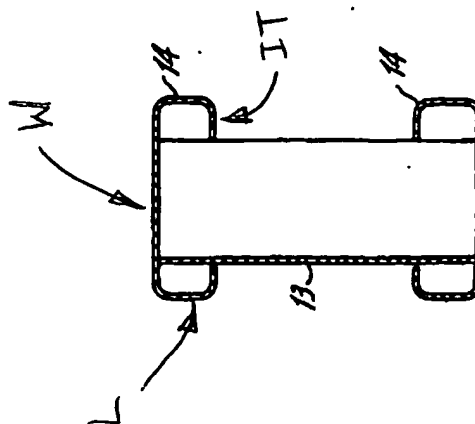


FIG. 11